

## WHAT IS CLAIMED IS:

1. An isolated polynucleotide that contains a nucleotide sequence encoding at least one complementarity-determining region (CDR) or framework-determining region (FR) of an anti-idiotypic antibody that binds to human or primate anti-HIV antibodies.
- 5 2. The polynucleotide of claim 1, wherein the anti-idiotypic antibody is monoclonal antibody 1F7 produced by hybridoma ATCC Accession No. HB 11286.
3. The polynucleotide of claim 1, wherein said CDR is a variable heavy (VH) or  
10 variable light (VL) chain CDR of monoclonal antibody 1F7.
4. The polynucleotide of claim 1, wherein said CDR has an amino acid sequence  
substantially identical to a sequence selected from the group consisting of SEQ ID  
15 NO: 11, SEQ ID NO: 15, SEQ ID NO: 19, SEQ ID NO: 28, SEQ ID NO: 32, and  
SEQ ID NO: 36.
5. The polynucleotide of claim 1, wherein said nucleotide sequence is selected from the  
group consisting of SEQ ID NO: 10, SEQ ID NO: 14, SEQ ID NO: 18, SEQ ID NO:  
20 27, SEQ ID NO: 31, and SEQ ID NO: 35.
6. The polynucleotide of claim 1, wherein said FR is a variable heavy (VH) or variable  
light (VL) chain FR of monoclonal antibody 1F7.
7. The polynucleotide of claim 1, wherein said FR has an amino acid sequence  
25 substantially identical to a sequence selected from the group consisting of SEQ ID  
NO: 9, SEQ ID NO: 13, SEQ ID NO: 17, SEQ ID NO: 21, SEQ ID NO: 26, SEQ ID  
NO: 30, SEQ ID NO: 34, and SEQ ID NO: 38.

8. The polynucleotide of claim 1, wherein said nucleotide sequence is selected from the group consisting of SEQ ID NO: 8, SEQ ID NO: 12, SEQ ID NO: 16, SEQ ID NO: 20, SEQ ID NO: 25, SEQ ID NO: 29, SEQ ID NO: 33, and SEQ ID NO: 37.

5 9. The polynucleotide of claim 1, wherein said nucleotide sequence encodes the amino acid sequence shown in SEQ ID NO: 7 or SEQ ID NO: 24.

10. The polynucleotide of claim 1, wherein said nucleotide sequence is shown in SEQ ID NO: 5 or SEQ ID NO: 22.

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11. The polynucleotide of claim 1, wherein said nucleotide sequence is operably linked to a human immunoglobulin constant region nucleotide sequence.

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12. A vector comprising a promoter operably linked to a nucleotide sequence encoding at least one complementarity-determining region (CDR) or framework-determining region (FR) of monoclonal antibody 1F7.

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13. The vector of claim 12, wherein said nucleotide sequence encodes a variable heavy (VH) or variable light (VL) chain of monoclonal antibody 1F7.

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14. The vector of claim 12, wherein said nucleotide sequence is operably linked to a human immunoglobulin constant region nucleotide sequence.

15. A cell line transformed with the vector of claim 12.

16. A polypeptide expressed by the cell line of claim 15.

17. A composition comprising the polypeptide of claim 16 and a pharmaceutically acceptable carrier.

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18. A method of modulating the immune response of a host infected with HIV comprising administering the polypeptide of claim 16 to the host.
19. A method of modulating the immune response of a host infected with HIV  
5 comprising administering the polynucleotide of claim 1 to tissues of the host.
20. A method of modulating the immune response of a host infected with HIV comprising administering the vector of claim 12 to the host.

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